

AMENDMENTS TO THE CLAIMS

Applicant submits below a complete listing of the current claims, including marked-up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing. This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A control circuit of a power supply delivering a supply current to an inductor connected in series with a horizontal deflection yoke of a cathode ray tube display for displaying pictures comprised of successive lines, said inductor being the primary coil of a low/high transformer operatively connected for delivering a rectified low-pass filtered biasing voltage to the anode of the display, said low-pass filtering having a first time constant corresponding to the duration of a small number of pictures, said control circuit comprising:

feedback means for generating a monitoring voltage substantially proportional to said biasing voltage and for controlling said supply current so as to keep said monitoring voltage equal to a reference voltage; and

feedforward means for measuring the cathode current supplied to the cathode of the display and for adding to said monitoring voltage a compensation voltage corresponding to said cathode current, low-pass filtered with a second time constant corresponding to the duration of a small number of lines and high-pass filtered with said first time constant.

2. (Previously Presented) A control circuit according to claim 1, wherein said monitoring voltage is provided by a sensing coil of the transformer, operatively connected through a rectifier diode and a first voltage divider to an integrator, the output of said integrator supplying an output control signal of the control circuit.

3. (Previously Presented) A control circuit according to claim 2, wherein the input and output of said integrator are respectively the inverting input and output of an operational amplifier, connected through a capacitor, the non inverting input of the operational amplifier receiving said reference voltage.

4. (Previously Presented) A control circuit according to claim 3, wherein said feedforward means comprise at least a second voltage divider provided for receiving the variations of the cathode voltage, the output of said second voltage divider being connected through a resistor to the anode of a diode, the cathode of said diode being connected to a predetermined threshold voltage; and the output of said second voltage divider being operatively connected through a capacitor to the input of said integrator.

5. (Previously Presented) A control apparatus of a cathode ray tube display for displaying pictures comprised of successive lines, comprising:

power supply means provided for supplying a supply current to an inductor connected in series with a horizontal deflection yoke of the display;

biasing means comprising a low/high transformer, the primary coil of said transformer being said inductor, for delivering a rectified low-pass filtered biasing voltage to the anode of the display, said low-pass filtering having a first time constant corresponding to the duration of a plurality of pictures;

feedback means for generating a monitoring voltage substantially proportional to said biasing voltage and for controlling said supply current so as to keep said monitoring voltage equal to a reference voltage; and

feedforward means for measuring the cathode current supplied to the cathode of the display and for adding to said monitoring voltage a compensation voltage corresponding to said cathode current, low-pass filtered with a second time constant corresponding to the duration of a small number of lines and high-pass filtered with said first time constant.

6. (Previously Presented) A control apparatus according to claim 5, wherein said monitoring voltage is provided by a sensing coil of the transformer, operatively connected through a rectifier diode and a first voltage divider to an integrator, the output of said integrator supplying an output control signal of the control circuit.

7. (Previously Presented) A control apparatus according to claim 6, wherein the input and output of said integrator are respectively the inverting input and output of an operational amplifier, connected through a capacitor, the non inverting input of the operational amplifier receiving said reference voltage.

8. (Previously Presented) A control apparatus according to claim 7, wherein said feedforward means comprises at least a second voltage divider provided for receiving the variations of the cathode voltage, the output of said second voltage divider being connected through a resistor to the anode of a diode, the cathode of said diode being connected to a predetermined threshold voltage; and the output of said second voltage divider being operatively connected through a capacitor to the input of said integrator.

9. (Previously Presented) A CRT display, the control apparatus of which comprises a control circuit according to claim 1.

10. (Previously Presented) A CRT display comprising a control apparatus according to claim 5.

11. (Previously Presented) A control process of a power supply provided for delivering a supply current to an inductor connected in series with a horizontal deflection yoke of a cathode ray tube display for displaying pictures comprised of successive lines, said inductor being the primary coil of a low/high transformer operatively connected for delivering a rectified low-pass filtered biasing voltage to the anode of the display, said low-pass filtering having a first time constant corresponding to the duration of a plurality of pictures, said control circuit comprising the following steps:

generating a monitoring voltage substantially proportional to said biasing voltage and controlling said supply current so as to keep said monitoring voltage equal to a reference voltage; and

measuring the cathode current supplied to the cathode of the display and adding to said monitoring voltage a compensation voltage corresponding to said cathode current, low-pass filtered with a second time constant corresponding to the duration of a small number of lines and high-pass filtered with said first time constant.

12. (New) A control circuit of a power supply that delivers a supply current to an inductor of a cathode ray tube display, said inductor being a primary coil of a low/high transformer operatively connected to deliver a rectified low-pass filtered biasing voltage to an anode of the display, said low-pass filtering having a first time constant corresponding to a duration of a small number of pictures, said control circuit comprising:

feedback circuitry constructed and arranged to generate a monitoring voltage substantially proportional to said biasing voltage and for controlling said supply current so as to keep said monitoring voltage equal to a reference voltage; and

feedforward circuitry constructed and arranged to measure a cathode current supplied to a cathode of the cathode ray tube display and for adding to said monitoring voltage a compensation voltage corresponding to said cathode current, low-pass filtered with a second time constant corresponding to the duration of a small number of lines and high-pass filtered with said first time constant.

13. (New) A control circuit according to claim 12, wherein said monitoring voltage is provided by a sensing coil of the transformer, operatively connected through a rectifier diode and a first voltage divider to an integrator, the output of said integrator supplying an output control signal of the control circuit.

14. (New) A control circuit according to claim 13, wherein the input and output of said integrator are respectively the inverting input and output of an operational amplifier, connected through a capacitor, the non inverting input of the operational amplifier receiving said reference voltage.

15. (New) A control circuit according to claim 14, wherein said feedforward means comprise at least a second voltage divider provided for receiving the variations of the cathode voltage, the output of said second voltage divider being connected through a resistor to the anode of a diode, the cathode of said diode being connected to a predetermined threshold voltage; and the output of said second voltage divider being operatively connected through a capacitor to the input of said integrator.

16. (New) A control apparatus of a cathode ray tube display for displaying pictures comprised of successive lines, comprising:

a power supply that supplies a supply current to an inductor coupled to a horizontal deflection yoke of the display;

a biasing circuit comprising a low/high transformer, a primary coil of said transformer being said inductor, for delivering a rectified low-pass filtered biasing voltage to an anode of the display, said low-pass filtering having a first time constant corresponding to a duration of a plurality of pictures;

feedback circuitry constructed and arranged to generate a monitoring voltage substantially proportional to said biasing voltage and for controlling said supply current so as to keep said monitoring voltage equal to a reference voltage; and

feedforward circuitry constructed and arranged to measure a cathode current supplied to a cathode of the cathode ray tube display and for adding to said monitoring voltage a compensation voltage corresponding to said cathode current, low-pass filtered with a second time constant corresponding to the duration of a small number of lines and high-pass filtered with said first time constant.

17. (New) A control apparatus according to claim 16, wherein said monitoring voltage is provided by a sensing coil of the transformer, operatively connected through a rectifier diode and a first voltage divider to an integrator, the output of said integrator supplying an output control signal of the control circuit.

18. (New) A control apparatus according to claim 17, wherein the input and output of said integrator are respectively the inverting input and output of an operational amplifier, connected through a capacitor, the non inverting input of the operational amplifier receiving said reference voltage.

19. (New) A control apparatus according to claim 18, wherein said feedforward means comprises at least a second voltage divider provided for receiving the variations of the cathode voltage, the output of said second voltage divider being connected through a resistor to the anode of a diode, the cathode of said diode being connected to a predetermined threshold voltage; and the output of said second voltage divider being operatively connected through a capacitor to the input of said integrator.

20. (New) A CRT display, the control apparatus of which comprises a control circuit according to claim 12.

21. (New) A CRT display comprising a control apparatus according to claim 16.

22. (New) A method for delivering a supply current to an inductor of a cathode ray tube display, said inductor being a primary coil of a low/high transformer operatively connected to deliver a rectified low-pass filtered biasing voltage to an anode of the display, said low-pass filtering having a first time constant corresponding to a duration of a plurality of pictures, comprising:

generating a monitoring voltage substantially proportional to said biasing voltage and controlling said supply current so as to keep said monitoring voltage equal to a reference voltage; and

measuring a cathode current supplied to the cathode of the display and adding to said monitoring voltage a compensation voltage corresponding to said cathode current, low-pass filtered with a second time constant corresponding to the duration of a small number of lines and high-pass filtered with said first time constant.